REMARKS

Claims 1, 3 and 5-10 have been examined on their merits. Claims 11-20 remain withdrawn from consideration as being drawn to a non-elected invention.

Applicant herein cancels claim 5 without prejudice and/or disclaimer.

Applicant herein amends claims 1 and 3 with the recitations of cancelled claim 5, and Applicant respectfully requests entry and consideration of the amendments to claims 1 and 3. The amendment presents no new issues that require further searching and/or consideration on the part of the Patent Office.

Claims 1, 3 and 6-20 are all the claims presently pending in the application.

1. Claims 1, 3, 6 and 10 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Fukuoka *et al.* (U.S. Patent No. 5,723,173). Applicant traverses the rejection of claims 1, 3, 6 and 10 at least for the reasons discussed below.

To support a conclusion that a claimed invention lacks novelty under 35 U.S.C. § 102, a single source must teach all of the elements of a claim. *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1379, 231 U.S.P.Q. 81, 90 (Fed. Cir. 1986). A claim is anticipated only if each and every element as set forth in the claim is found either expressly or inherently in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). A single source must disclose all of the claimed elements arranged as in the claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). A proper anticipation rejection requires that every

element of the claim be found "in a single prior art reference." *See In re Robertston*, 169 F.3d 743, 745, 49 U.S.P.Q.2d 1949, 1950 (Fed. Cir. 1999). For anticipation to exist, there must be no difference between the claimed invention and the reference disclosure, as that reference would be understood by one of ordinary skill in the art. *See Scripps Clinic & Research Found. v. Genentech, Inc.*, 927 F.2d 1565, 1576, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir 1991); *see also, Crown Operations Intn'l, Ltd. v. Solutia, Inc.*, 289 F.3d 1367, 62 U.S.P.Q.2d 1917 (Fed. Cir. 2002). Rejections under 35 U.S.C. § 102 are proper only when the claimed subject matter is identically disclosed or described in the prior art. Thus, the cited reference must clearly and unequivocally disclose every element and limitation of the claimed invention.

In rejecting claim 5 (whose recitations have been added to independent claims 1 and 3), the Patent Office alleges that fluorocarbon polymer inherently lacks an ion-exchange function. Applicant reminds the Patent Office that the fact that a certain element *may* be present in the prior art is *not* sufficient to establish the inherency of that element. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 U.S.P.Q.2d 1955, 1957 (Fed. Cir. 1993) *citing In re Oelrich*, 666 F.2d 578, 581, 212 U.S.P.Q. 323, 326 (CCPA 1981). "To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *In re Robertson*, 169 F.3d 743, 745, 49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted). "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably

support the determination that the allegedly inherent characteristic *necessarily* flows from the teachings of the applied prior art." *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). The Patent Office has provided no factual basis and/or technical reasoning as why the fluorocarbon polymer disclosed by Fukuoka *et al.* would inherently lack an ion-exchange function. The caselaw from the Court of Appeals for the Federal Circuit and the Board of Patent Appeals and Interferences is clear that proving inherency is the Patent Office's burden, and mere allegations of inherency, without factual basis and/or technical reasoning, are insufficient.

Furthermore, the Patent Office acknowledges that the fluorocarbon polymer has to be porous because a carbon powder supporting a noble metal catalyst is treated for water repellence with the polymer judging from the sentence based on the following disclosure of Fukuoka *et al.*:

> Furthermore, as shown in FIG. 2, by further adding a carbon powder treated for water repellence with fluorocarbon polymer 11 to the catalyst layer 2, the gas channel 7 can be formed without excessive covering with the catalyst particles 3 and, thus, it becomes possible to realize a solid polymer electrolyte fuel cell which shows the higher polarization characteristic in the area of high current density. *See* col. 4 line 56-62 of Fukuoka *et al.*

However, this carbon powder does not support a noble metal catalyst. It is clear that the carbon powder does not support the catalyst, since Fukuoka *et al.* clearly distinguish the carbon powder supporting a noble metal catalyst from the carbon powder not supporting the catalyst. Therefore, the fluorocarbon polymer does not need to be porous.

Moreover, another method of the present invention comprises the steps of mixing an organic solvent with an alcoholic solution of a solid polymer electrolyte to produce a colloid of

the solid polymer electrolyte and to obtain a colloidal dispersion in which the colloid is dispersed, **adding a carbon powder supporting a noble metal catalyst** to the said colloidal dispersion to obtain a mixed solution comprising the carbon powder to which the colloid of the solid polymer electrolyte is adsorbed, adding to the mixed solution a carbon powder treated for water repellence with fluorocarbon polymer, applying the mixed solution on one side of a gas-diffusion layer to produce an electrode, and pressing the resulting electrode onto at least one side of a solid polymer electrolyte membrane to integrate them. *See* col. 5 line 1-14 of Fukuoka *et al.* *See also*, col. 6 line 23-43 of Fukuoka *et al.*

In the first step of the method, an alcoholic solution (14) containing solid polymer electrolyte (5) and organic solvent (12) are mixed and stirred to produce a colloidal dispersion of solid polymer electrolyte (5) as shown in Figure 6a. In the second step shown in Figure 6b, when a catalyst-supporting carbon powder (13) is added to the colloidal dispersion, the solid polymer electrolyte (5) is adsorbed onto the surface of the catalyst-supporting carbon powder (13). The size of agglomeration of the solid polymer electrolyte (5) varies depending on the amount of the organic solvent and the difference of molecular chain of the organic solvent, and the uniformity of adsorption can be controlled. Then, 25 grams of carbon powder (15) treated for water repellence with addition of 25-70% by weight of PTFE is added as shown in Figure 6c. When the catalyst-supporting carbon powders (13) having the solid polymer electrolyte (5) adsorbed thereto and the carbon powder (15) are allowed to collide with each other by ultrasonic dispersion or the like, the solid polymer electrolyte adsorbed to the catalyst-supporting carbon

powder is also adsorbed to other carbon powder (4) to form a bridging agglomeration as shown in Figure 6d to make the dispersion pasty. *See* col. 6 line 23-43 of Fukuoka *et al.*

Thus, Fukuoka *et al.* only disclose a carbon powder treated for water repellence with fluorocarbon polymer. Fukuoka *et al.* do not even explain the method of treatment for water repellence with the polymer. Therefore, porous polymer, which has numerous pores of the porous polymer material itself, is not disclosed in Fukuoka et al.

2. Claim 5 stands rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Fukuoka *et al.* The § 102(b) rejection of claim 5 is now moot due to its cancellation, and Applicant respectfully requests withdrawal of the rejection.

3. Claim 5 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Fukuoka *et al.* The § 103(a) rejection of claim 5 is now moot due to its cancellation, and Applicant respectfully requests withdrawal of the rejection.

4. Claims 7-9 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Fukuoka *et al.* Applicant traverses the rejection of claim 7-9 at least for the reasons discussed below.

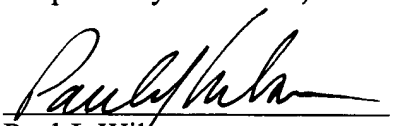
Claims 7-9 depend from independent claims 1 or claim 3. As discussed above, Fukuoka *et al.* fails to teach or suggest several features of the claimed invention recited in claims 1 and 3. Therefore, Applicant submits that claims 7-9 are allowable at least by virtue of their dependency

from claims 1 and 3. The Patent Office is respectfully requested to withdraw the § 103(a) rejection.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Paul J. Wilson
Registration No. 45,879

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: January 5, 2005